Amine Benaceur

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EXPERIENCE

Software Engineer Intern • NeuroFus Laboratory • Calgary, AB   **09/2019 - 09/2020**

- Implemented features for importing and displaying DICOM medical brain scans and setting target 3D coordinates for ultrasound treatment in python.
- Interfaced Application with hardware data acquisition devices, signal generators and video capture cameras.
- Fixed performance and lag issues through restructuring application infrastructure to balance load between several inter-communicating processes.
- Designed R.O.S framework interface to control 3-axis motor for targeting ultrasound in 3D space.
- Improved UI for usability through heuristic evaluations and iteratively implementing user test feedback.
- Provided live tech support during experiments for researchers using the system.

EDUCATION

University of Calgary • BSc. In Software Engineering   **Class of 2021, Internship program**

- Interesting Coursework:
  - Human-Computer Interaction, Computer Security, Virtual Reality, Biometric System Design, Embedded System Interfacing
- Extracurriculars:
  - *Autonomous Electric Motorsports:* An ambitious club to create an obstacle-avoiding autonomous racing vehicle optimized for speed.
  - *UofC Dino's Men's Rugby:* Learned the meaning of leadership and discipline.

PROJECTS

- Laboratory Animal Monitor: Managed a team of 6 engineers to design an animal monitor system for lab mice in experiments. Implemented remote heartrate and temperature monitoring, data graphing as well as remote application P.I.D heating control functionality (accurate within 0.5 °c).
- Autonomous Electric Motorsports: Collaborated with mechanical and electrical engineers to build an obstacle-avoiding race car optimized for speed. Implemented drivers for motors and servos.
- Learning Platform: An online learning platform for use of students and professors to facilitate learning, enrolling in courses, uploading, assigning, and grading assignments as well as email communication.
- TwitchHub: A Twitch streaming web application utilizing the Twitch API. Users can sign up and subscribe to various categories and then stream the relevant videos within their feed.
- Frog Blog: A website for blogging and image-sharing.
- VR Haptics Ping Pong: A single player virtual reality ping pong game interfaced with a hardware force feedback device with haptic effects for immersion.
- Personal Portfolio Website: For additional projects & information visit: https://aminebenaceur.github.io/

SKILLS

- Languages: Python, JavaScript, Java, C, C++, Bash, PostgreSQL, Ruby, PHP, C#, HTML/CSS
- Frameworks/Libraries: React, Node.js, Ruby on Rails, Django, Laravel
- Tooling: Git, Linux, Docker, AWS
- Concepts: Human-Computer Interaction, Web Development, Embedded Systems, Object Oriented Programming, Distributed version Control